October 20, 2017
Nick Deffley
Director of Sustainability
City of Savannah, Georgia
ndeffley@savannahga.gov
912-651-6909

RE: Award Agreement for Green Infrastructure to Green Jobs Initiative

Dear **Nick Deffley**:

Global Philanthropy Partnership (GPP) is pleased to award the City of Savannah a grant from the Southeast Sustainable Communities Fund (SSCF) for the Green Infrastructure to Green Jobs Initiative in the amount of $92,277 for year one (January 1, 2018-December 31, 2018). This grant project has a twenty four month term beginning January 1, 2018 ending December 31, 2019. A second year payment, contingent on year one performance and reporting described in this letter, will bring the total award for two years to $233,244.

<u>Document Outline</u>

Section 1. Grant Summary

Recently, Hurricane Matthew caused significant damage to Savannah's tree canopy and neighborhoods, costing $13 million in tree debris removal and unknown losses in water storage from mature trees. As our region experiences extremes in weather, municipal governments look to tree canopies and green infrastructure to improve their community's resiliency to the effects of major storm events at a very local level. In addition, there are over 350 flood-prone FEMA vacant lots throughout Savannah's low-income neighborhoods that are underutilized assets. This project intends to create urban tree nurseries and green infrastructure pilot projects on City-owned vacant FEMA lots through a green job training program. A portion of the plantings will become permanent green infrastructure, and a portion will be used in City rights of way, in the process creating pocket parks for the enjoyment of the surrounding communities.

Section 2. Involved Parties

The lead applicant that submitted the grant proposal is the lead grantee who is responsible for ensuring the work is completed and the funds are used as detailed in this grant award letter. Project partners are accountable to the lead grantee. All parties are actively involved in project implementation and are committed to the results of the project.

- Lead Grantee: City of Savannah, Nick Deffley, Sustainability Director, ndeffley@savannahga.gov, (912) 651-6909
- Project Partners: Savannah Tree Foundation: Karen Jenkins, Executive Director, Karen@savannahtree.com, (912) 233-8733
  Victory Gardens: Kerry Shay, Owner Design and Installation Lead, kerry@savannahvictorygardens.com, (912)509 -0709
  Savannah Impact Program: Sala Menaya, SIP Director, smanaya@savannahga.gov, (912) 651 – 4350
  University of Georgia Marine Extension and Georgia Sea Grant: Jill Gambill, Coastal Community Resilience Specialist and Public Service Assistant, jgambill@uga.edu, (706)542-3463

Section 3. Project Narrative

This project will focus primarily on neighborhoods participating in "The Green Infrastructure to Green Jobs Initiative" will receive a number of comprehensive benefits. The addition of green infrastructure amenities will address challenges related to water pollution, flooding, energy use, greenhouse gas emissions and heat island impacts in affected communities. In an EPA study on how green infrastructure affects climate resiliency in New Orleans, Albuquerque, Grand Rapids and Los Angeles, benefits identified included resiliency to drought conditions, lowering building energy demands, managing flooding events, improving coastal resiliency to storm surge, reducing urban heat island effects by shading building surfaces, deflecting solar radiation and releasing moisture into the atmosphere.

This innovative pilot program will prepare low-lying and low-income communities to combat the threat of repeat flooding issues and economic disinvestment through green jobs training that will provide STEM-based workforce development. In addition, we will utilize an inclusive outreach process to engage the community, gather input and educate residents on the benefits inherent to green infrastructure. These efforts will lead to the creation of three community-driven urban-tree nursery and alternative green infrastructure projects on vacant city-owned FEMA lots. The community engagement process will also help identify and address community needs related to public safety, recreation and neighborhood beautification in relation to project sites, which will be implemented as part of the project. Tree plantings will be grown for use in City right of ways to improve Savannah's tree canopy, creating pocket parks to be enjoyed by the surrounding communities, and a portion will remain onsite as permanent green infrastructure to help mitigate future flood risks. The project will have three main components:

● Neighborhood Outreach will include meetings on flooding, stormwater infrastructure, the importance of Savannah's tree canopy, the dangers of heat and how to creatively repurpose FEMA lots. University of Georgia Marine Extension and Georgia Sea Grant will be the lead partner organization, in conjunction with the City of Savannah and other consultants. They will lead six community-based workshops to communicate project goals, gain buy-in from local partners, and gather feedback from the surrounding neighborhoods. These workshops will result in the creation of an advisory committee to oversee the design and implementation of three green infrastructure projects, based on community input and the needed ecosystem services. Community participant stipends, food, materials and childcare will all be included in these workshops to promote attendance and long-term commitment. The resulting pilot project designs will also be paired with the job training component of the program.

● Training and Education for at-risk youth in tree planting and maintenance, green infrastructure, community flooding, and native plants is the second element of the project. Existing programs like the Savannah Impact Program and YouthBuild workforce development programs will be engaged to recruit and provide the structure for paying trainees. The lead partner organization in this part of the program will be Savannah Victory Gardens and Savannah Tree Foundation, who have experience in training and engaging community in ecological gardening and tree planting projects.

● Implementing Green Infrastructure Pilots will involve engaging partner organizations and program participants to develop designs for green infrastructure installations with high flood reduction and low-maintenance needs. Example projects could include: bioswales, small tree nurseries, community orchard projects and native landscaping. GIS information and expertise from the Savannah-Chatham Metropolitan Planning Commission and City of Savannah Certified Floodplain Manager will be engaged to choose the most appropriate sites for flooding and permitting reasons. Long-term maintenance of the sites will be an agreement between City and partner non-profit organizations, who can use the site for educational, tree nursery and programming purposes. The projects will be monitored before and after implementation to understand their impacts, such as capacity to reduce flooding.

To meet the grant objectives, the City of Savannah, Georgia, as the lead grantee, will achieve the goals described below. There are several project goals we will measure over the course of the project. The first is to develop a community engagement and education program and Community Advisory Group to support outreach and the design and development of green infrastructure sites across three City of Savannah neighborhoods. The second goal is to recruit and train 15 at-risk youth from the communities where pilot project sites are implemented. Our third goal is to implement three site-specific green infrastructure projects across three half-acre sites by the end of the 2-year grant. The long-term goal of engaging our advisory group and the graduates of the program is to successfully support graduates of the training program in job placement with the City of Savannah and other landscaping companies operating green infrastructure services. Finally, over the course of the project, we intend to plant a minimum of 300 trees on sites throughout the City, in addition to the Park and Tree department's planting projects.

By achieving the aforementioned goals, The City of Savannah, Georgia, as the lead grantee, will produce the following outcomes: The outcomes of the project will include training 15 young people in green infrastructure and arboriculture coursework as part of the Savannah Impact Program and Youth Build Programs. In addition to these 35 contact hours, the students in the programs will gain 200 contact hours of real-world experience by planting three half-acre FEMA sites with flood tolerant species of trees and ground cover. Other cities that have implemented green infrastructure programs have seen flooding reduce from 7 to 12 percent. Our hope is to create successful pilot projects that can be incorporated into a larger green infrastructure program utilizing tree lawns and vacant lots throughout City of Savannah neighborhoods with serious street and property flooding issues.

A second outcome of the program will be to provide the City with knowledgeable maintenance staff who can implement these kinds of projects on future FEMA lots. Currently, the City has difficulty hiring arborists and other skilled labor for landscape maintenance, and doesn't have staff with knowledge of how to apply green infrastructure practices. Developing these skills in a small pilot workforce and developing a curriculum to supplement future green infrastructure training programs is a positive outcome to combat persistent flooding issues. In the future, the City of Savannah will require more than grey infrastructure and engineering solutions to mitigate stormwater stresses. Furthermore, building the capacity of non-profit organizations to support and partner with City organizations to reach common goals for improving tree canopy and building resiliency projects can support City strategic goals of reducing poverty and neighborhood revitalization.

Additionally, this project provides an outlet for implementing the City's Stormwater Management Ordinance and Georgia Coastal Stormwater Supplement, which calls for offsetting downtown development through green infrastructure best practices. This funding source can enable the replication of this project on future FEMA lots. Our efforts will also feed into City actions to improve Savannah's score in FEMA's Community Rating System from a 5 to a 4, reducing flood insurance rates, which is a supported goal of our Development Services Department.

Finally, engaging youth in positive workforce training and the development of green jobs skills will help to both improve opportunities for living wage jobs in Savannah and decrease some of the underlying root causes of poverty and lack of upward mobility in some of Savannah's most economically disadvantaged communities. If Savannah invests in its young people and takes advantage of funding opportunities available for counteracting the long-term impacts of climate change, the benefits will affect both the physical and social health of the community.

Section 4. Project Budget by Milestones and Metrics

Table 1. Project Budget by Milestones and Metrics.

Major Milestones	Success Metrics	Responsible Party	Timeline	Budget
Neighborhood Outreach and Community Engagement Workshops	Building neighborhood buy-in and partnerships in selecting and designing green infrastructure sites with a focus on trees. Number of involved organizations and neighborhood residents will be tracked and compensated.	City of Savannah and UGA Marine Extension and Georgia Sea Grant	Jan 2018 – June 2018	$38,608
Green Infrastructure Training Program	We will recruit 15 people from the Savannah Impact Program for a summer course on arborist tree maintenance, green infrastructure, community flooding and native plants installations.	Savannah Impact Program, Savannah Tree Foundation and Victory Gardens	July 2018 – Dec 2018	$11,897

Implementation of Tree Planting Pilots	Partner organizations will receive funds to lead the implementation of the green infrastructure site designs with the Savannah Impact Program participants. Implementation funds for community safety features, recreation amenities and neighborhood beautification in pilot project area will also be supported through the grant.	Savannah Impact Program and Victory Gardens (with support from UGA Marine Extension and Georgia Sea Grant and Savannah Tree Foundation)	Dec 2018 – May 2019	$173,772
Grant Reporting and Post-Installation Study	Partner organization, UGA Marine Extension and Georgia Sea Grant, will provide graduate student support for a study of the final climate change and stormwater impact of this grant. City of Savannah will share report with communities and City staff.	UGA Extension and Sea Grant and City of Savannah, including Green Infrastructure Intern	June 2019 – December 2019	$8,967

Section 5. Grant Requirements

The City of Savannah, Georgia, as lead grantee, has agreed to meet six key grant requirements:

1. **Submit Quarterly Progress Updates.** These updates will be brief (2-3 paragraphs) and will include: 1. progress on major milestones; 2. results achieved to date (outputs and outcomes); 3. funds spent to date; 4. explanation of any major changes to the project milestones, timeline, or budget. These updates will be emailed to SSCF Coordinator Meg Jamison (meg@southeastsdn.org) on the dates in **Table 2** (below).

2. **Participate in Quarterly Grantee Cohort Calls.** The lead grantee (and key project partners, if desired) will participate in quarterly grantee cohort calls to share progress and learn from each other. This includes one call after the grant term to discuss grant program lessons learned. Calls will be coordinated by SSCF staff. The general timeline is outlined in **Table 2** (below), the specific dates will be determined before December 22, 2017.

3. **Submit a Year One Progress Report.** This report will be no more than three pages and will include 1. progress on major milestones; 2. results achieved to date (outputs and outcomes); 3. funds spent to date; 4. explanation of any major changes to the Year One project milestones, timeline, or budget; and 5. proposed Year Two project budget by milestones and metrics table (**Table 1**). Note: the proposed Year Two budget will not exceed the Year Two estimate included in this grant agreement. This report will be emailed to Coordinator Meg Jamison (meg@southeastsdn.org) by December 3, 2018.

4. **Participate in Year Two Planning Call.** The lead grantee (and key project partners, if desired) will participate in a Year Two Planning call with the SSCF Program Manager. The purpose of this call will be to review Year One performance, discuss the proposed Year Two project budget by milestones and metrics table, and determine if Year One performance merits the Year Two grant payment. Calls will be coordinated by SSCF staff and conducted in December 2018, specific date and time to be determined. Year Two payments will be issued within 30 days of approval from the SSCF Program Manager.

5. **Submit a Final Report.** This report will be between 5-10 pages and will include three deliverables: 1. a final grant report that describes outcomes, impact, follow on work planned, funds leveraged, and lessons learned (use template in **Appendix 1**); 2. a detailed record of grant fund expenditures, including a comparison of original budget (**Section 4**) to actual expenditures; 3. Any materials created for this grant project that demonstrate the project outputs and/or outcomes in a way that could help SSCF share the success of the grant program with other communities and other funders. This report will be emailed to SSCF Coordinator Meg Jamison (meg@southeastsdn.org) by January 4, 2020.

6. **Participate in Storytelling Activities.** Some lead grantees and project partners will be asked to participate in storytelling activities. Storytelling activities will be coordinated by SSCF. Examples of what this activity will produce include written feature stories, participant profiles, photo essays, sound recordings, videos, and/or local media coverage.

Section 6. Grant Deadlines

		Table 2. Key Grant Requirement Deadlines	
	Deliverable	**2018 Deadlines**	**2019/2020 Deadlines**
1.	**Quarterly Progress Reports**	● March 30, 2018 ● June 29, 2018 ● September 28, 2018 ● See Year One Milestone Progress Report below	● March 29, 2019 ● June 28, 2019 ● September 27, 2019 ● See Final Report below
2.	**Quarterly Peer Learning Progress**	Specific dates and times to be determined before December 22,	Specific dates and times to be determined before December 21,

	Calls	2017. ● April 2018 ● July 2018 ● October 2018 ● January 2019	2018. ● April 2019 ● July 2019 ● October 2019 ● January 2020
3.	**Year One Milestone Progress Report**	December 3, 2018	Not applicable
4.	**Year Two Planning Call**	Specific date and time in December 2018 to be determined.	Not applicable
5.	**Final Report**	Not applicable	January 4, 2020
6.	**Storytelling Activities**	To be determined	

Section 7. Grant Payment Schedule and Terms

GPP will issue two lump sum grant award payments to the lead grantee or their designated project fiscal sponsor. The first payment will be for Year One project implementation in the amount of $97,277. The second payment will be for Year Two project implementation, is contingent on successful performance of Year One milestones, and will be in the amount of $151,956. Prior to issuing Year Two payment, the SSCF may require a written scope update from the lead grantee to update expectations and deliverables for Year Two work. If this is required, the scope update will be drafted by the lead grantee, approved by the SSCF Program Manager, signed by GPP and the lead grantee, and added an an attachment to the original grant award letter.

Section 8. Additional Grant Terms
● Grant funds cannot be used for lobbying.
● The project must be a collaboration with the partners described in Section 2.
● The grantee is aware that failure to deliver, significant timeline extensions, and/or over budget projects will jeopardize future applications to the fund from this grantee if this fund continues.
● Unless otherwise specified in a separate agreement with GPP and the project partner, ownership and rights of the deliverables will be equally shared by the lead community, the partner, and GPP on behalf of SSDN. SSDN reserves the right to share and post both privately with members and funders, and publically to advance the field of urban sustainability.

If you agree with the terms and conditions of this grant agreement, complete and sign the Section 9. Acceptance of Grant Terms form, and email to April Donnellan at april@global-philanthropy.org and Maggie

Ullman at Maggie@southeastsdn.org no later than November 30, 2017. Year One grant payments will be issued within 30 days of receipt.

Sincerely,

April K. Donnellan
Executive Director, Global Philanthropy Partnership

CC: Maggie Ullman, SSCF Program Manager
CC: Meg Jamison, SSCF Program Coordinator

Section 9. Acceptance of Grant Terms Form

By signing this form, the City of Savannah, Georgia, accepts the terms and conditions of this grant agreement in its entirety.

Lead Grantee

Name:	Roberto Hernandez
Title:	City Manager
Email:	
Phone:	912.525.3100
Tax ID Number of lead grantee:	58-60000660
Instructions for Check Issuance or Bank Transfer:	Check to City of Savannah, Attn: Nick Deffley
Signature:	

Project Fiscal Sponsor (if different from above)

Organization:	Same as above
Name:	
Title:	
Email:	
Phone:	
Tax ID Number:	
Instructions for Check Issuance or Bank Transfer:	
Signature:	

Project Manager Information (if different from above)

Organization:	City of Savannah
Name:	Nick Deffley
Title:	Sustainability Director
Email:	ndeffley@savannahga.gov
Phone:	912.651.6909
Signature:	

Appendix 1. Final Grant Report Form

1. **Outcomes:** What outcomes did the project achieve? Did the project achieve its intended results and reach the goals cited in the proposal? Why or why not?

2. **Impact on the lead grantee organization:** What has changed in your community as a result of the grant?

3. **Describe the project activities and accomplishments including:**
   ○ **Climate Impacts:** Describe how the project produced results to mitigate and/or adapt to climate change.
   ○ **Equity Impacts:** Describe how the project reduced disparities for the most marginalized members of the community while improving well-being for all. Explain the involvement and influence of priority stakeholders on the results of the project.
   ○ **Partnership Impacts:** Describe how relationships with partners grew as a result of this project. Explain what has changed in the partner organizations as a result of the grant. Describe any new collaborative efforts between the lead grantee and partners as a result of this grant project.
   ○ **Local Policy Impacts:** Describe how this project has impacted local government policy and/or programs. Explain how this project has produced results for local government policy and/or programs. Describe if and how any local policy has changed or resulted based on this project.

4. **Follow on Work:** What additional work is happening as a follow on to the grant and who is doing this work?

5. **Matching Funds:** Have additional funds been raised for this work? From whom and how much? (Our funders want to know if the grant leveraged any other funds.)

6. **Climate Lessons Learned:** What are 2-3 key lessons learned from this project for how to advance climate mitigation and/or adaptation outcomes in local communities.

7. **Equity Lessons Learned:** What are 2-3 key lessons learned from this project for how to advance equitable outcomes in local communities.

8. **Do you have any feedback for how to improve the Southeast Sustainable Communities Fund?**

9. **Final Budget Report:** Report by Item, Proposed Budget, and Actual Spending. A detailed record of expenditures of grant funds, including a comparison of actual expenses to your proposed budget (see Section 4 of this grant agreement).

10. **Supporting Materials:** Please also submit nny relevant products of the grant (final reports, guide books, PPTs, description of programs or policies launched, media coverage, etc.).

Return to Meg Jamison (meg@southeastsdn.org) on or before January 4, 2020.

Appendix 2. Grantee Award Guidance

Document Purpose

This document is a guide for Southeast Sustainable Communities Fund (SSCF) lead applicants and/or lead grantees. SSCF wants to ensure receipt of funds is not a barrier for anyone to participate in an award, and will work with lead grantees and fiscal sponsors to develop flexible solutions when necessary.

Who Issues the Grant Award?

SSCF is not an independent legal entity or a nonprofit organization. The Global Philanthropy Partnership (GPP) is a 501 (c) 3 nonprofit that houses SSCF as a project within its organization. GPP serves as the legal entity and fiscal sponsor on SSCF's behalf. This means that all contracting, granting, and / or legal agreements associated with SSCF are actually with GPP. When SSCF issues grant awards, GPP is the legal entity signing grant award letters with lead grantees and issuing funds to either lead grantees or fiscal sponsors of the grant project.

Who is the Grant Awardee?

SSCF issues grant award letters to the city/county lead applicant on the grant proposal who is deemed the lead grantee. The lead grantee is the primary point of contact with the SSCF for the grant award and grant reporting. The lead grantee is the entity to sign the Acceptance of Grant Terms Form.

Who Can Receive Funds, and How?

The lead grantee or the project fiscal sponsor designated in the Acceptance of Grant Terms Form can receive the grant funds after the lead grantee and GPP sign the award letter.

The lead grantee tax ID / EIN is required in all cases. This is because the award is being made to the city/county, and so the city/county's tax ID / EIN is the number GPP's tax auditor requires. The City/County is the lead grantee and is responsible for the work of the grant (content), approval of all payments (budget), and reporting on the grant (quarterly and final reports).

Project Fiscal Sponsor Eligibility. In order for a project fiscal sponsor to receive funds on behalf of the lead grantee the project fiscal sponsor must be a 501(c)3 Nonprofit Organization. The project fiscal sponsor can be performing work on the grant project, or serving solely as a fiscal sponsor on the lead grantee's behalf.

Funds Disbursement. GPP will issue two lump sum grant award payments to the lead grantee or their designated project fiscal sponsor. The first payment will be for Year One project implementation and not to exceed $150,000. The second payment will be for Year Two project implementation, is contingent on successful performance of Year One milestones, and will not exceed $150,000. Prior to issuing Year Two payment, the SSCF may require a written scope update from the lead grantee to update expectations and deliverables for Year Two work. If this is required, the scope update will be drafted by the lead grantee, approved by the SSCF Program Manager, signed by GPP and the lead grantee, and added an an attachment to the original grant award letter.

Appendix 3. Copy of Grant Proposal

1. Project Summary

a. Project Title: City of Savannah – Green Infrastructure to Green Jobs Initiative

b. Summary Statement: Recently, Hurricane Matthew caused significant damage to Savannah's tree canopy and neighborhoods, costing $13 million in tree debris removal and unknown losses in water storage from mature trees. As our region experiences extremes in weather, municipal governments look to tree canopies and green infrastructure to improve their community's resiliency to the effects of major storm events at a very local level. In addition, there are over 350 flood-prone FEMA vacant lots throughout Savannah's low-income neighborhoods that are underutilized assets. This project intends to create urban tree nurseries and green infrastructure pilot projects on City-owned vacant FEMA lots through a green job training program. A portion of the plantings will become permanent green infrastructure, and a portion will be used in City rights of way, in the process creating pocket parks for the enjoyment of the surrounding communities.

c. Total Two-Year Funding Request: $233,244

d. Lead Applicant: City of Savannah, Nick Deffley, Sustainability Director, ndeffley@savannahga.gov, (912) 651-6909

e. Partner(s):
 Savannah Tree Foundation: Karen Jenkins, Executive Director, Karen@savannahtree.com, (912) 233-8733
Victory Gardens: Kerry Shay, Owner Design and Installation Lead, kerry@savannahvictorygardens.com, (912)509-0709
Savannah Impact Program: Sala Menaya, SIP Director, smanaya@savannahga.gov, (912) 651 – 4350
University of Georgia Marine Extension and Georgia Sea Grant: Jill Gambill, Coastal Community Resilience Specialist and Public Service Assistant, jgambill@uga.edu, (706)542-3463

2. Make the Case:

a. Need: More than a quarter of Savannah's residents live at or below the federal poverty level; in some neighborhoods the statistic exceeds 50%. These poverty rates have persisted for more than 30 years and far exceed the national and state poverty rates (15% and 17% respectively). The long-term impacts of this concentration of poverty are numerous, resulting in higher crime rates, educational challenges, inadequate housing, poor human health conditions and a lack of sustained employment opportunities.

Indicative of the impacts associated with long-term poverty in our community, Savannah's 2017 crime rate is 45 crimes per one thousand inhabitants, which is high for a city of our size and higher than the national rate of approximately 32 crimes per one thousand inhabitants. That includes a 66% jump in homicides from 2014 to 2015, from 32 murders to 53 murders. The number of children under 18 who live under the poverty line in

Savannah is 37%. Children growing up in poverty are more likely to have lower rates of school completion and participation in gang activity. Currently, 16% of adults in Savannah do not have a high school diploma or GED. With over 55% of City residents being African American and approximately 5% Hispanic, a disproportionate amount of poverty is found within the minority community.

Given the challenges that poverty poses for youth, especially within the African American community, there is a strong need for job readiness programs that can support at-risk youth in their neighborhoods. In addition, many of these same communities are dealing with increasing vacant properties and flooding risks from extreme weather events and climate change, which add to the stressors already impacting these neighborhoods' quality of life.

The Savannah region has experienced 10 inches of sea level rise since 1935. New research indicates that the Southeast United States is currently experiencing rates of up to three times the global average for sea level rise (Valle-Levinson et al., 2017). Looking to the future, NOAA predicts between one to 8.2 feet of global sea level rise by 2100 (Sweet et al., 2017).

As our region experiences extremes in climate and weather, our municipal government is looking to tree canopies and green infrastructure to improve our community's resilience to the effects of major weather events at a very local level. The three neighborhoods we have chosen for this innovative FEMA lot green infrastructure project include West Savannah (34% poverty rate, 50% African American), Victory Heights (28% poverty rate, 48% African American) and Daffin Heights/Edgemere Sackville (38% poverty rate, 48% African American). These neighborhoods represent areas with high social vulnerability, where economic disparities coexist with risks of flooding and sea level rise, according to NOAA. These neighborhoods also contain a large number of city-owned FEMA properties, and have neighborhood support for alternative uses for these lots, such as community gardens. A recent City study found that these lots are appropriate for tree nurseries. One solution to the pressing socio-ecological issues in Savannah is to engage communities most affected by climate change and poverty through green-collar jobs.

b. Solution: Neighborhoods participating in "The Green Infrastructure to Green Jobs Initiative" will receive a number of comprehensive benefits. The addition of green infrastructure amenities will address challenges related to water pollution, flooding, energy use, greenhouse gas emissions and heat island impacts in affected communities. In an EPA study on how green infrastructure affects climate resiliency in New Orleans, Albuquerque, Grand Rapids and Los Angeles, benefits identified included resiliency to drought conditions, lowering building energy demands, managing flooding events, improving coastal resiliency to storm surge, reducing urban heat island effects by shading building surfaces, deflecting solar radiation and releasing moisture into the atmosphere.

This innovative pilot program will prepare low-lying and low-income communities to combat the threat of repeat flooding issues and economic disinvestment through green jobs training that will provide STEM-based workforce development. In addition, we will utilize an inclusive outreach process to engage the community,

gather input and educate residents on the benefits inherent to green infrastructure. These efforts will lead to the creation of three community-driven urban-tree nursery and alternative green infrastructure projects on vacant city-owned FEMA lots. The community engagement process will also help identify and address community needs related to public safety, recreation and neighborhood beautification in relation to project sites, which will be implemented as part of the project. Tree plantings will be grown for use in City right of ways to improve Savannah's tree canopy, creating pocket parks to be enjoyed by the surrounding communities, and a portion will remain onsite as permanent green infrastructure to help mitigate future flood risks. The project will have three main components:

● Neighborhood Outreach will include meetings on flooding, stormwater infrastructure, the importance of Savannah's tree canopy, the dangers of heat and how to creatively repurpose FEMA lots. University of Georgia Marine Extension and Georgia Sea Grant will be the lead partner organization, in conjunction with the City of Savannah and other consultants. They will lead six community-based workshops to communicate project goals, gain buy-in from local partners, and gather feedback from the surrounding neighborhoods. These workshops will result in the creation of an advisory committee to oversee the design and implementation of three green infrastructure projects, based on community input and the needed ecosystem services. Community participant stipends, food, materials and childcare will all be included in these workshops to promote attendance and long-term commitment. The resulting pilot project designs will also be paired with the job training component of the program.

● Training and Education for at-risk youth in tree planting and maintenance, green infrastructure, community flooding, and native plants is the second element of the project. Existing programs like the Savannah Impact Program and YouthBuild workforce development programs will be engaged to recruit and provide the structure for paying trainees. The lead partner organization in this part of the program will be Savannah Victory Gardens and Savannah Tree Foundation, who have experience in training and engaging community in ecological gardening and tree planting projects.

● Implementing Green Infrastructure Pilots will involve engaging partner organizations and program participants to develop designs for green infrastructure installations with high flood reduction and low-maintenance needs. Example projects could include: bioswales, small tree nurseries, community orchard projects and native landscaping. GIS information and expertise from the Savannah-Chatham Metropolitan Planning Commission and City of Savannah Certified Floodplain Manager will be engaged to choose the most appropriate sites for flooding and permitting reasons. Long-term maintenance of the sites will be an agreement between City and partner non-profit organizations, who can use the site for educational, tree nursery and programming purposes. The projects will be monitored before and after implementation to understand their impacts, such as capacity to reduce flooding.

c. Result: The outcomes of the project will include training 15 young people in green infrastructure and arboriculture coursework as part of the Savannah Impact Program and Youth Build Programs. In addition to these 35 contact hours, the students in the programs will gain 200 contact hours of real-world experience by

planting three half-acre FEMA sites with flood tolerant species of trees and ground cover. Other cities that have implemented green infrastructure programs have seen flooding reduce from 7 to 12 percent. Our hope is to create successful pilot projects that can be incorporated into a larger green infrastructure program utilizing tree lawns and vacant lots throughout City of Savannah neighborhoods with serious street and property flooding issues.

A second outcome of the program will be to provide the City with knowledgeable maintenance staff who can implement these kinds of projects on future FEMA lots. Currently, the City has difficulty hiring arborists and other skilled labor for landscape maintenance, and doesn't have staff with knowledge of how to apply green infrastructure practices. Developing these skills in a small pilot workforce and developing a curriculum to supplement future green infrastructure training programs is a positive outcome to combat persistent flooding issues. In the future, the City of Savannah will require more than grey infrastructure and engineering solutions to mitigate stormwater stresses. Furthermore, building the capacity of nonprofit organizations to support and partner with City organizations to reach common goals for improving tree canopy and building resiliency projects can support City strategic goals of reducing poverty and neighborhood revitalization.

Additionally, this project provides an outlet for implementing the City's Stormwater Management Ordinance and Georgia Coastal Stormwater Supplement, which calls for offsetting downtown development through green infrastructure best practices. This funding source can enable the replication of this project on future FEMA lots. Our efforts will also feed into City actions to improve Savannah's score in FEMA's Community Rating System from a 5 to a 4, reducing flood insurance rates, which is a supported goal of our Development Services Department.

Finally, engaging youth in positive workforce training and the development of green jobs skills will help to both improve opportunities for living wage jobs in Savannah and decrease some of the underlying root causes of poverty and lack of upward mobility in some of Savannah's most economically disadvantaged communities. If Savannah invests in its young people and takes advantage of funding opportunities available for counteracting the long-term impacts of climate change, the benefits will affect both the physical and social health of the community.

d. Regional Replicability: The desired long-term scalability of the program is focused on offsetting regional development with appropriate green infrastructure that developers can fund through a stormwater management fund. The concept is that downtown and suburban development without sufficient space to offset storm water management requirements can pay into a "green infrastructure" bank for future projects on FEMA lots. In this way, funding for the training and implementation of FEMA green infrastructure projects could be replicated in future neighborhoods and shared as a best practice for other coastal communities throughout Georgia and the Southeast through UGA Marine Extension and the NOAA Sea Grant network. Beyond the regional focus of our own municipality, the green infrastructure pilot sites will be living classrooms for other local governments, students, resource managers and scientists throughout the Southeast to learn about

innovative uses of flood-prone FEMA lots through field trips, demonstration site visits, webinars and UGA Marine Extension courses. A final long-term regional impact is the potential for decreasing nutrient loads and other pollutants reaching our sensitive coastal marshes and ecosystems downstream.

e. Definition of Success: There are several project goals we will measure over the course of the project. The first is to develop a community engagement and education program and Community Advisory Group to support outreach and the design and development of green infrastructure sites across three City of Savannah neighborhoods. The second goal is to recruit and train 15 at-risk youth from the communities where pilot project sites are implemented. Our third goal is to implement three site-specific green infrastructure projects across three half-acre sites by the end of the 2-year grant. The long-term goal of engaging our advisory group and the graduates of the program is to successfully support graduates of the training program in job placement with the City of Savannah and other landscaping companies operating green infrastructure services. Finally, over the course of the project, we intend to plant a minimum of 300 trees on sites throughout the City, in addition to the Park and Tree department's planting projects.

f. Measurement: Some of the metrics we can expect to measure include: Flooding rate of localized streets near pilot project sites, graduation rate of green infrastructure trainees, and pre-and post- test results of participants' experience, as well as number of trees planted in pilot projects. Finally, the number of community members engaged in educational and community planting events, the advisory committee and additional outreach opportunities will be tracked.

3. Project Design:

Major Milestones	Success Metrics	Responsible Party	Timeline	Budget
Neighborhood Outreach and Community Engagement Workshops	Building neighborhood buy-in and partnerships in selecting and designing green infrastructure sites with a focus on trees. Number of involved organizations and neighborhood residents will be tracked and compensated.	City of Savannah and UGA Marine Extension and Georgia Sea Grant	Jan 2018 – June 2018	$38,608

Green Infrastructure Training Program	We will recruit 15 people from the Savannah Impact Program for a summer course on arborist tree maintenance, green infrastructure, community flooding and native plants installations.	Savannah Impact Program, Savannah Tree Foundation and Victory Gardens	July 2018 – Dec 2018	$11,897
Implementation of Tree Planting Pilots	Partner organizations will receive funds to lead the implementation of the green infrastructure site designs with the Savannah Impact Program participants. Implementation funds for community safety features, recreation amenities and neighborhood beautification in pilot project area will also be supported through the grant.	Savannah Impact Program and Victory Gardens (with support from UGA Marine Extension and Georgia Sea Grant and Savannah Tree Foundation)	Dec 2018 – May 2019	$173,772
Grant Reporting and Post-Installation Study	Partner organization, UGA Marine Extension and Georgia Sea Grant, will provide graduate student support for a study of the final climate change and stormwater impact of this grant. City of Savannah will share report with communities and City staff.	UGA Extension and Sea Grant and City of Savannah, including Green Infrastructure Intern	June 2019 – December 2019	$8,967

a. Describe what you plan to accomplish in each year of the project.

In the first year of the project, we intend to build community support through outreach to neighborhood residents, neighborhood businesses, CEMA (Chatham Emergency Management Agency), City Council, state legislators and local schools. This initial educational outreach is a critical piece of the success and long-term use

of the pilot study project. UGA Marine Extension and Georgia Sea Grant will be involved as a partner organization to assist with arranging community outreach efforts, developing a Community Advisory Group and tracking scientific indicators of tree and green infrastructure planting sites. Also in the first year, we plan to engage partner organizations, primarily Victory Gardens and Savannah Tree Foundation, to develop the curriculum and training materials for the workforce development program, ideally starting the program in the summer and continuing through the fall (with approximately 35 contact hours across this time period). The Chatham-Savannah Metropolitan Planning Commission (MPC), Savannah Area Geographic Information Systems (SAGIS), City of Savannah Stormwater, Parks and Recreation, Real Property Services, Development Services and Park & Tree Departments will be consulted on the most appropriate sites for the pilot projects.

In the second year of the program, we plan to fully design and implement pilot program sites in the three identified neighborhoods, taking into account GIS data to choose the most appropriate locations for the selected treatments and where they will benefit community flooding issues. Since this is a pilot study, engaging expertise from UGA Marine Extension and Georgia Sea Grant will be an important element to verify the benefits of these sites for flooding issues and to support design charrettes with communities using university students and resources. Implementation will be led by ecological design company, Victory Gardens, with support on tree selection from Savannah Tree Foundation. Students in the workforce development program will contribute 200 contact hours of experiential learning. A memorandum of agreement with partner organizations will be drafted to underscore long-term maintenance of the sites and use for education and community engagement in the future.

Throughout both years of the project, the City of Savannah and UGA Marine Extension and Georgia Sea Grant will broadly communicate project milestones and impacts, developing press releases and feature stories, promoting local media coverage, and launching social media campaigns that include participant profiles, photos, videos and educational resources.

b. Funding Requests: Year 1 ($92,277) and Year 2 ($140,967)

c. Match and Source: The City of Savannah Sustainability Office will provide in-kind match through staff support for the community engagement elements of the project equaling 15% of full-time support and benefits of a grant manager through Nick Deffley's time as Sustainability Office Director ($31,290 for two years). UGA Marine Extension and Sea Grant will also provide in-kind support for travel and indirect costs related to their support services ($1,006). Match support in the form of community planning and environmental services staff and volunteer hours at community meetings and volunteer tree planting events is estimated to total $6,068 based on partner organizations' time commitment. Furthermore, the Savannah Impact Program's Community Reentry Collaborative, which will support recruitment for the green infrastructure training component, will provide intensive supervision & accountability, cognitive-behavioral training and employment soft skills training in addition to the technical training provided through this grant (estimated at $10,000 in in-kind staff services).

d. Implementation Responsibility: Implementation partners will include Savannah Tree Foundation, Savannah

Victory Gardens and the Savannah Impact Program. Program oversight and grant management will be led by the City of Savannah Sustainability Office.

e. Fiscal Responsibility: Nick Deffley with the Sustainability Office will receive grant funds and disperse to partner organizations.

f. Project Budget: See the attached Grant Budget sheet.

Project Description:

a. Community Sustainability: As a low-lying coastal city, the proposed project will promote climate change adaptation by directly affecting flood prone communities with attractive and functional green infrastructure. Green infrastructure enhances resilience in the built environment by reducing vulnerabilities to flooding. In the urban environment, green, tree-filled spaces can also mitigate the urban heat island effect by providing shade and reducing cooling costs in nearby structures, both benefits for reducing the effects of climate change. Natural features can also provide habitat for animals in urban and rural areas, and when connected, can provide migration corridors that offer additional benefits to flora and fauna affected by climate change.
b. Equity and Inclusiveness: The stakeholders in this project are the low-income, socially vulnerable neighborhoods affected by repeat flooding and long-term sea level rise. These vulnerable populations will benefit from localized job training opportunities, career tracks in green infrastructure fields and improved home values adjacent to green infrastructure assets in the community. Residents will partner in the design of sites using Crime Prevention through Environmental Design so neighbors feel the nursery sites are both safe and attractive. A Community Advisory Group will be formed to envision the sites' layout and community engagement plan.
c. Community Partnership: The Savannah Tree Foundation and Victory Gardens will provide training and support to the Savannah Impact Program or YouthBuild participants and engage UGA Marine Extension and Georgia Sea Grant in the community outreach elements of the project. The City of Savannah has a 20-year history of working with Savannah Tree Foundation on tree planting projects, and more recently, with Savannah Victory Gardens on community garden projects.
d. Local Impact: This grant supports implementation of the City's new 2017 Strategic Plan priorities to reduce street flooding caused by 25-year rain events, engaging Savannah youth with workforce training opportunities, implementing strategies to reduce poverty & build economic strength and creating more sustainable neighborhoods. This program will build on the City's FEMA lot policy and the Community Garden Program, already operating on these flood-prone lots. It will also help to advance the City's Stormwater Management Ordinance by providing sites that can offset downtown development through the City's "Green Infrastructure Bank" program, showing the value of such programs to residents and City staff.